Claim Amendments

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A device for producing optical glass fibers, comprising:

a fiber furnace having heating bushes disposed as a matrix configuration for simultaneously receiving a number of ~~performs~~ preforms, said matrix configuration having mutually parallel first matrix axes and mutually parallel second matrix axes ~~being~~ disposed at an angle α of less than 90° with respect to one another and said heating bushes being disposed at respective crossing points of said first and second axes;

a follow-up device configured to hold and feed the preforms into said heating bushes;

a drawing and sizing installation configured to receive glass fibers drawn from the preforms in said heating bushes such that the glass fibers lie next to one another as a band when being received by said drawing and sizing installation; and

a making-up device configured to receive the glass fibers from said drawing and sizing installation.

Claim 2 (cancelled).

Claim 3 (original): The device according to claim 1, wherein said heating bushes are disposed such that said matrix configuration forms a rhomboid configuration.

Claim 4 (previously presented): The device according to claim 1, wherein:

said heating bushes are disposed such that respective distances between directly neighboring ones of said heating bushes on each of said matrix axes are substantially identical.

Claim 5 (original): The device according to claim 1, wherein said heating bushes are disposed in one plane.

Claim 6 (original): The device according to claim 1, wherein each of said heating bushes has an associated one of the preforms assigned thereto.

Claim 7 (original): The device according to claim 1, wherein said fiber furnace has at least 110 heating bushes.

Claim 8 (original): The device according to claim 7, wherein said matrix configuration has a first principal matrix axis and a second principal matrix axis, said matrix configuration has 10 of said heating bushes disposed in a direction of the first principal matrix axis and has 11 of said heating bushes disposed in a direction of the second principal matrix axis.

Claim 9 (original): The device according to claim 1, wherein said fiber furnace includes a temperature controller with individual controllers configured to individually control temperatures in said heating bushes.

Claim 10 (original): The device according to claim 9, wherein said individual controllers have respective measuring and compensating devices for adjusting temperatures in said heating bushes in relation to temperatures in neighboring heating bushes.

Claim 11 (original): The device according to claim 1, wherein:

each of said heating bushes has at least one heating element; and

each of said heating bushes has at least one diffuser provided between said at least one heating element and a respective one of the preforms for diffusing a heating radiation.

Claim 12 (original): The device according to claim 1, wherein:

each of said heating bushes has a number of separately activatable heating coils; and

each of said heating bushes has at least one diffuser provided between said heating coils and a respective one of the preforms for diffusing a heating radiation.

Claim 13 (original): The device according to claim 11, wherein:

said at least one diffuser includes a quartz glass tube; and

said follow-up device feeds the preforms such that a corresponding one of the preforms passes through the quartz glass tube.

Claim 14 (original): The device according to claim 1, wherein each of said heating bushes has a flow device for creating a laminar air flow in a respective one of said heating bushes.

Claim 15 (original): The device according to claim 14, wherein:

said flow device includes an extension part provided at a lower portion of said respective one of said heating bushes; and

said extension part has no heating elements assigned thereto.

Claim 16 (original): The device according to claim 11, wherein:

each of said heating bushes has a flow device for creating a laminar air flow in a respective one of said heating bushes;

said flow device includes an extension part provided at a lower portion of said respective one of said heating bushes such that said at least one diffuser and said extension part form a one-piece element; and

said extension part has no heating elements assigned thereto.

Claim 17 (original): The device according to claim 14, wherein said flow device includes at least one flow baffle disposed at an upper end of said respective one of said heating bushes such that an annular air gap with a given gap width is formed between a respective one of the preforms and said at least one flow baffle for venting air through the annular air gap.

Claim 18 (original): The device according to claim 1, wherein said follow-up device has a supporting plate with individual suspensions for individually receiving the preforms.

Claim 19 (original): The device according to claim 18, wherein said individual suspensions on said supporting plate form a matrix configuration corresponding to said matrix configuration formed by said heating bushes.

Claim 20 (original): The device according to claim 18, wherein each of said individual suspensions has a vacuum connection for connecting each respective one of the preforms to a central vacuum system.

Claim 21 (original): The device according to claim 18, wherein:

said follow-up device includes a geared motor, a threaded spindle and a guide; and

said geared motor is configured to selectively drive and brake said supporting plate via said threaded spindle and said guide for advancing the preforms.

Claim 22 (original): The device according to claim 18, wherein said supporting plate is configured to be manually movable into a service position.

Claim 23 (original): The device according to claim 18, wherein said supporting plate is configured to be automatically movable into a service position.

Claim 24 (original): The device according to claim 1, wherein said fiber furnace has a flow collar disposed at an output end of said heating bushes for creating an air cushion for a delayed cooling of the glass fibers.

Claim 25 (original): The device according to claim 1, including a cooling zone provided downstream of said fiber furnace for cooling the glass fibers.

Claim 26 (original): The device according to claim 25, wherein said cooling zone includes a funnel disposed upstream of said drawing and sizing installation such that the glass fibers are passed through said funnel.

Claim 27 (original): The device according to claim 1, wherein said drawing and sizing installation includes a first size roller and a second size roller disposed such that glass fibers from a first half of said fiber furnace pass over said first size roller and glass fibers from a second half of said fiber furnace pass over said second size roller.

Claim 28 (cancelled).

Claim 29 (original): The device according to claim 1, wherein said fiber furnace is configured to receive preforms for producing multicomponent glass fibers.

Claim 30 (withdrawn): A method for producing glass fibers, the method which comprises:

providing a device according to claim 1;

introducing, with the follow-up device, preforms into the heating bushes of the fiber furnace;

producing glass fibers from the preforms by drawing the glass fibers with a given constant diameter from the heating bushes;

providing the heating bushes as a configuration that ensures that the glass fibers are drawn without crossing and touching one another;

cooling the glass fibers in a predetermined manner in a cooling zone downstream of the fiber furnace; and

passing the glass fibers via the drawing installation to the making-up device.

Claim 31 (withdrawn): The method according to claim 30, which comprises drawing each of the preforms with a controlled temperature profile in an associated one of the heating bushes.

Claim 32 (withdrawn): The method according to claim 30, which comprises:

holding the preforms with a supporting plate of the follow-up device; and

drawing each of the preforms with a controlled advancement of the supporting plate.

Claim 33 (withdrawn): The method according to claim 30, which comprises cooling the glass fibers over a given temperature profile.

Claim 34 (withdrawn): The method according to claim 30, which comprises uniformly wetting the glass fibers with a sizing agent by rolling the glass fibers as a band over size rollers of a sizing installation provided downstream from the cooling zone.

Claim 35 (withdrawn): The method according to claim 30, which comprises drawing each of the glass fibers at a substantially identical drawing rate by using a drawing-off roller.

Claim 36 (withdrawn): The method according to claim 32, which comprises controlling a drawing rate of a drawing-off roller and an advancement of the supporting plate by using an electronic data processing installation.

Claim 37 (withdrawn): The method according to claim 30, which comprises controlling temperatures in the heating bushes by using an electronic data processing installation.

Claim 38 (withdrawn): The method according to claim 30, which comprises making up, with the making-up device, the glass fibers without causing any reactions on devices upstream of the making-up device.

Claim 39 (withdrawn): A heating bush configuration, comprising:

a heating bush configured to receive a preform; and

said heating bush having a heating element and a diffuser provided between said heating element and the preform for diffusing a heating radiation.

Claim 40 (withdrawn): The heating bush configuration according to claim 39, wherein said heating element includes separately activatable heating coils.

Claim 41 (withdrawn): The heating bush configuration according to claim 39, wherein said diffuser includes a quartz

glass tube disposed such that the preform is passed through said quartz glass tube.

Claim 42 (withdrawn): The heating bush configuration according to claim 39, wherein said heating bush has a flow device for creating a laminar air flow in said heating bush.

Claim 43 (withdrawn): The heating bush configuration according to claim 42, wherein said flow device includes an extension part provided at a lower portion of said heating bush, and said extension part has no heating element assigned thereto.

Claim 44 (withdrawn): The heating bush configuration according to claim 43, wherein said diffuser and said extension part form a one-piece element.

Claim 45 (withdrawn): The heating bush configuration according to claim 42, wherein said flow device includes at least one flow baffle disposed at an upper end of said heating bush such that an annular air gap with a given gap width is formed between the preform and said at least one flow baffle for venting air through the annular air gap.